PATENT SPECIFICATION

367,580

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PROVISIONAL SPECIFICATION.

Mouth or Nasal Medicament Inhalers.

I, RONALD HAYDEN LINTON, British Subject, of 4, Racquet Court, Fleet Street, London, E.C., do hereby declare the nature of this invention to be as follows:—

An inhaling device consisting of a container of suitable shape and material, at the upper end of which there is a comparatively wide aperture adapted to be closed by a screw cover, whereas the lower end is provided with an air-tight closable capillary. For this purpose a rubber disc provided with a central bore is inserted in the screw closing cap. Through this bore a hollow piston closed at the outer end and open at the inner end, extends. The piston rod is provided laterally with slots in such a manner that these are closed by the rubber disc after the piston has been slipped into the inhaler, but are exposed when the piston is pulled out. The inside of the container is adapted to hold the medicament which may be in the form of surgical tow, cotton wool or the like, soaked with a suitable preparation for the relief of nose and throat ailments, or the prevention of common colds, hay-fever or other diseases of the respiratory track. When the medicament is inhaled through the nose or mouth air can flow in through the capillary, thus enabling a strong draught to be obtained and thereby facilitating the healing effect. The capillary has the special advantage that whilst it allows the air to flow through the container, it does not permit the medicament to escape owing to its narrow cross-section. The object of the invention is to provide a simple, compact and inexpensive appliance which can be carried by the user and utilised as a medicated inhaler whenever desired.

Dated the 7th day of March. 1931.

R. H. LINTON.

COMPLETE SPECIFICATION.

Mouth or Nasal Medicament Inhalers.

I, RONALD HAYDEN LINTON, British Subject, of 4, Racquet Court, Fleet Street, in the City of London, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to an improved mouth or nasal medicament inhaler, the chief object being the provision of a simple, compact and inexpensive device of this character, which can be carried, for instance, in the pocket of the user.

Another object is the provision of an inhaler device in which, when not in use, the medicament therein is maintained, in an improved manner, positively out of contact with the atmosphere. It may be here stated that in connection with apparatus for facilitating the inhalation of medicated vapour, it has previously been proposed to close each end of a hollow body, having a centrally located mouth piece, by a handle having a longitudinally extending opening therein adapted to be retained normally closed by a valve member carried by one end of a spring pressed rod positioned within the opening, the other end of each rod having an operating part which extends outwardly of the handle.

According to the invention there is provided an inhaler comprising a hollow body portion for the reception of a medicament, a removable closure member for each end thereof, one of the said members enclosing a nozzle which serves as a mouth-piece or nose-piece, the other member having valve means associated therewith to open or close the body portion to the atmosphere, wherein the valve means is mounted within an opening in a seating arranged within the

respective closure member, and is movable relatively thereto by an operating portion extending outwardly of the closure member.

Other features of the invention are hereinafter described and set forth in the claims.

The invention will now be described by way of example with reference to the accompanying drawing, in which:—

Figure 1 is an elevation of the inhaler,

Figure 2 is a longitudinal section thereof, showing the valve means in closed position,

Figure 3 is a sectional elevation showing the valve means in open position,

Figure 4 is a sectional view of a modified form of valve means, and

Figure 5 is a sectional view of a further form of valve means.

Referring to Figures 1 to 3 of the drawings, the reference numeral 1 indicates a hollow body portion, open at each end for the reception of a suitable medicament which may be in the form of surgical tow, cotton wool or the like soaked with an appropriate preparation for the relief of nose and throat ailments, or for the prevention of common colds, hay-fever or other diseases of the respiratory tract. The body portion 1 may be of any convenient cross-sectional shape and formed of any suitable material such as, for instance, glass. One end of the body 1 is of tapered form as shown at 2 to provide an inhaling nozzle or part, which end is provided with a closure member or cap 3, which, as shown in the drawing, is screw threaded to engage screw threads on the tapered part 2. The cap 3 is preferably provided with a disc of rubber, cork or the like 3a to seal the end of the nozzle 2 when the device is not in use. The other end of the body 1 is provided with a closure member or cap 4 which may be in screw-threaded cooperation with the said end of the body 1 in a manner similar to the member 2. The closure member 4 is provided with a rubber or like seating which may be in the form of a disc 5, having an opening therethrough for the reception of a tubular valve member 6, the end of the closure member 4 being provided with an opening to correspond with the opening in the disc 5. The valve member 6 is open at the inner end and closed at the outer end thereof and is provided with openings 7 of convenient shape, for instance, they may be circular as shown, or they may be of elongated or other form. These openings in the member 6 are so positioned therein that when the member 6 is in its innermost position none of the openings are exposed to the atmosphere, as will be seen from Figure 2, which shows certain of the openings 7 closed or sealed by the disc 5 whilst the opening or openings nearer to the open end of the member 6 is or are within the body part 1 and are, therefore, not exposed to the atmosphere. In Figure 3, the member 6 is shown as being in its outermost position with all of the openings 7 exposed to the atmosphere.

It will be appreciated, when the caps 3 and 4 are in position on the body portion 1 of the inhaler, and the valve means is closed as shown in Figures 1 and 2, that the device is effectively sealed and the medicament therein is maintained out of contact with the atmosphere when the device is not in use and that when it is desired to employ the device as an inhaler the cap 3 is removed and the valve means opened or withdrawn as shown in Figure 3, to permit a current of air to flow through the device.

According to the modification shown in Figure 4, the valve means may be in the form of a spring pressed valve stem 8 slidable within an aperture 9 in a rubber or like seating such as a disc 5a. The stem 8 is provided with a valve head 10 to seat on the disc 5a. In this form the cap member 4 is provided with convenient means such as an apertured member 11, which will permit air to flow through the body part 1 when the head 10 is disengaged from its seating, the cap 5a being also apertured to allow of this. As shown in Figure 4, the valve spring indicated at 12 is housed in the member 11, which member 11 and the cap member 4, form abutments for the spring 12. In Figure 5, there is indicated a rotary form of valve operable from the side of the device and comprising a stem member 13 having an aperture 14 therein adapted in the position for use to communicate with the atmosphere by way of an opening 15 in a rubber or like disc 5b, and an opening 16 in the cap 4, whilst in the other or out of use position, the opening 15 is closed upon rotation of the stem 13 through 90 degrees by means of a finger piece 17. Stops 18 such as portions punched up from the cap 4 may be employed to limit the movement of the member 13 by engaging the finger piece 17 in one or both directions of movement thereof.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A mouth or nasal medicament inhaler, comprising a hollow body portion for the reception of the medicament, a

removable closure member for each end thereof, one of the said members enclosing a nozzle which serves as a mouthpiece or nose-piece, the other member having valve means associated therewith to open or close the body portion to the atmosphere, wherein the valve means is mounted within an opening in a seating arranged within the respective closure member, and is movable relatively thereto by an operating portion extending outwardly of the closure member.

2. An inhaler according to Claim 1 or 2 wherein the valve means comprise a hollow member having an opening or openings therein and mounted for sliding movement within the seating.

3. An inhaler according to Claim 1 or 2, wherein the valve means comprise a valve stem having a valve head thereon adapted to be retained resiliently in sealing engagement with the seating.

4. An inhaler according to Claim 1 or 2, wherein the valve means comprise a rotatable member adapted to be moved into or out of sealing engagement with the seating.

5. An inhaler according to any of the preceding Claims, wherein the seating is formed of rubber or the like and is arranged within the closure member so as to engage the respective end of the hollow body portion.

6. A mouth or nasal medicament inhaler having the parts thereof constructed, arranged and adapted to operate substantially as hereinbefore described with reference to any of the examples shown in the accompanying drawings.

Dated this 17th day of August, 1931.

J. S. WITHERS & SPOONER,
Chartered Patent Agents,
Staple House, 51 & 52, Chancery Lane, London,
Agents for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1932.

[This Drawing is a reproduction of the Original, on a reduced scale.]

Fig. 1.

Fig. 2.

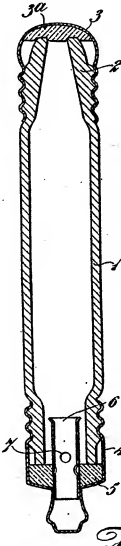


Fig. 3.

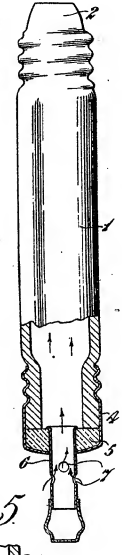


Fig. 4.

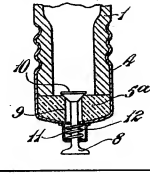
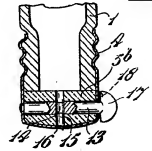


Fig. 5.



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